Merger Project Team Meeting Agreement

Concurrence Point No. 2A : Bridging Decisions
Concurrence Point No. 4A : Avoidance & Minimization

Project Name/Description: Greensboro Eastern Urban Loop from US 70 Relocation to SR 2303 (Lawndale Drive) in Guilford County

TIP Project No.: U-2525 B and C

WBS No.: 34821.1.3 and 34821.1.4

See attached documents for bridging decisions and avoidance and minimization measures.

The Project Team has concurred on this date of April 11, 2006, on Concurrence Point 2A (Bridging Decisions) and Concurrence Point 4A (Avoidance and Minimization) for TIP Projects R-2525B and R-2525C.

USACOE _____ NCDOT _____

USEPA _____ USFWS _____

DWQ _____ WRC _____

SHPO _____ MPO _____

Concurrence Point 2A/4A Meeting
April 11, 2006

T.I.P. Numbers U-2525 B and C

Guilford County

Sign In Sheet

Name	Dept./Agency	Phone	Email
Travis Wilson	NCWRC	919-528-9886	travis.Wilson@ncwildlife.org
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JOHN HENNESSY	NCDWQ		John.Hennessy@ncmail.net

Name	Dept./Agency	Phone	Email

MEMO TO FILE / NOTES FROM U2525B & C MERGER 2A & 4A MEETING HELD ON 04/11/06

- Site 2 (located near Huffine Mill Interchange): since the site is in the proximity of US 70 Interchange, shifting the alignment is not feasible
- Site 5: NCDOT was able to shift the alignment 50' to the south and reducing the culvert length thus minimizing about 100' of stream impacts; however shifting the alignment any further is impractical since a property to the south is under development
- Site 6: a new alignment was designed to the north, however, NCDOT recommends maintaining the original since it would require relocating 8 additional homes thus increasing the R/W costs by about $2 Million

NEW SITES

- Site 9: the agency would rather visit the site and make recommendation whether on-site mitigation is feasible or not
- Site 10: agency is OK with culvert but expressed concern with all the tributaries tying in, will visit the site
- Site 11: the ramp in NW quadrant was eliminated and a loop was added in NE quadrant to minimize the impacts; it was mentioned about partial stream relocation and extension of the bridge of about 100' to 150' to cover the stream, however, more information will be available for the 4B meeting
- Site 12: no alignment shift is possible since the slope stakes are on the edge of every development
- Site 13: previously the site contained a pipe, since the project was upgraded to urban it requires at least a culvert in it's place, however, the bridge will be extended additional 40' to encompass the stream and eliminate a potential box culvert
- Historical Property (located near Site 4): the site is eligible to be registered as a historical site, the alignment will be looked at to see if it would lessen the impacts

ALL AGENCIES AGREED AND SIGNED 2A & 4A

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CONCURRENCE MEETING
INFORMATION PACKET
FOR YOUR REVIEW
PRIOR TO MEETING
ON APRIL 11, 2006
PROJECT ENGINEER
LISA FELLER
U-2525 B&C

Please bring this packet

to the meeting.

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Concurrence on ZA/4A signed on 4/11/06

April 11, 2006

U-2525B and C Greensboro Eastern Urban Loop
From US 70 Relocation to SR 2303 (Lawndale Drive)
In Guilford County, North Carolina

State Project No. 6.498003T
WBS Nos. 34821.1.3 and 34821.1.4

Agenda

Lisa Feller, PE, - PDEA Project Development Engineer
Drew Joyner, PE, - PDEA Project Engineer

1. Introductions

2. Purpose of Meeting

3. Brief Project History / Environmental Document History

4. Field Meeting Avoidance and Minimization Options

5. Additional Major Stream Crossing Sites

6. Historic Property / Section 106 Consultation

7. Discussion, Questions and Concerns

8. Summary

U-2525B and C
HYDRAULIC STRUCTURE REQUIREMENTS
Rural versus Urban Design Comparison

SITE	STREAM	STATION	STRUCTURE (Rural)	STRUCTURE (Urban)
1	UT South Buffalo Cr.	48+37-L-	1@10X10 RCBC	2@9X9RCBC
2	UT North Buffalo Cr.	115+00-L-	1@7X7 RCBC	2@7X7RCBC
3	North Buffalo Cr.	143+00-L-	Dual 500ft.x 48ft. bridges	Dual 500ft.x 48ft. bridges
4	UT North Buffalo Cr.	218+30-L-	1@7X7 RCBC	2@7X7RCBC
5	UT North Buffalo Cr.	241+20-L-	1@7X7 RCBC	2@7X7RCBC
6	UT Richlands Cr.	364+90-L-	1@6X6 RCBC	2@6X6RCBC
7	UT Richlands Cr.	493+85-L-	1@10X10 RCBC	2@9X9RCBC
8	UT North Buffalo Cr.	157+00-L-	New Site	1@6X6RCBC
9	UT Richlands Cr.	382+75-L-	New Site	1@6X6RCBC
10	UT Richlands Cr.	431+63-L-	New Site	1@5X6RCBC
11	UT Richlands Cr.	472+55-L-	New Site	1@7x7RCBC
12	UT Richlands Cr.	552+55-L-	New Site	1@7X7RCBC
13	UT North Buffalo Cr.	129+38-L-	New Site	Dual 150ft.x 48ft.bridges

NOTES: 1. RCBC – Reinforced Concrete Box Culvert
2. Jordan Lake Watershed
3. Culvert size and bridge length is subject to change based on final Hydraulic recommendations.
4. Table indicates all drainage structures 72 inch and above.

U-2525B and C
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Rural versus Urban Design Comparison

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5	UT North Buffalo Cr.	241+20-L-	1@7X7 RCBC	2@7X7RCBC
6	UT Richlands Cr.	364+90-L-	1@6X6 RCBC	2@6X6RCBC
7	UT Richlands Cr.	493+85-L-	1@10X10 RCBC	2@9X9RCBC
8	UT North Buffalo Cr.	157+00-L-	New Site	1@6X6RCBC
9	UT Richlands Cr.	382+75-L-	New Site	1@6X6RCBC
10	UT Richlands Cr.	431+63-L-	New Site	1@5X6RCBC
11	UT Richlands Cr.	472+55-L-	New Site	1@7x7RCBC
12	UT Richlands Cr.	552+55-L-	New Site	1@7X7RCBC
13	UT North Buffalo Cr.	129+38-L-	New Site	Dual 150ft.x 48ft.bridges

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April 11, 2006

U-2525B and C Greensboro Eastern Urban Loop
From US 70 Relocation to SR 2303 (Lawndale Drive)
In Guilford County, North Carolina

State Project No. 6.498003T
WBS Nos. 34821.1.3 and 34821.1.4

Agenda

Lisa Feller, PE, - PDEA Project Development Engineer
Drew Joyner, PE, - PDEA Project Engineer

1. Introductions

2. Purpose of Meeting

3. Brief Project History / Environmental Document History

4. Field Meeting Avoidance and Minimization Options

5. Additional Major Stream Crossing Sites

6. Historic Property / Section 106 Consultation

7. Discussion, Questions and Concerns

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AGENDA
Eastern Concurrence Meeting
Thursday, April 11, 2006
Board Room, Transportation Building
Raleigh, North Carolina

3:00 PM to 5:00 PM – Lisa Feller – NCDOT- PDEA Branch
TIP No. U-2525 B&C – Greensboro Eastern Loop
Guilford County, Division 7

Team Members:

John Thomas, USACE
Lisa Feller, PDEA
Chris Militscher, USEPA
Gary Jordan, USFWS
Travis Wilson, NCWRC
Sue Homewood, DWQ
Sarah McBride, SHPO
Tyler Meyer, Greensboro Urban Area MPO

NCDOT Technical Support Staff and Other Agency Staff:

Kathy Matthews, USEPA
Brad Wall, Division 7
Jerry Parker, Division 7
Craig McKinney, Greensboro MPO
Jim Speer, Roadway Design
Danny Gardner, Roadway Design
John Gauthier, Roadway Design
Randy Henegar, Hydraulics
Jennifer Parish, Roadside Environmental
Mark Staley, Roadside Environmental
Andy Bailey, TPB
Brett Feulner, PDEA NEU
Bill Barrett, PDEA NEU
Mary Pope Furr, PDEA HEU
Ed Lewis, PDEA HEU
Drew Joyner, PDEA
Eric Midkiff, PDEA

Note: This is a Pipeline project that merger process owners have determined should be placed in the merger process at CP 4A.

** The purpose of this meeting is to achieve concurrence on concurrence points 4A and 2A.*

CONCURRENCE MEETING
INFORMATION PACKET

Tuesday, April 11, 2006
3:00 pm
Board Room, Transportation Building
Raleigh, North Carolina 27601

TIP # U-2525 B&C

GREENSBORO EASTERN URBAN LOOP

MEETING TO REACH CP2A-BRIDGING DECISIONS & CP4A-AVOIDANCE & MINIMIZATION

PDEA PROJECT DEVELOPMENT ENGINEER
LISA FELLER, PE
(919)733-7844, EXT. 262
lfeller@dot.state.nc.us

NEPA/404 MERGER TEAM MEETING
TIP Project Nos. U-2525B and C
WBS Nos. 34821.1.3 and 34821.1.4
State Project No. 6.498003T

Greensboro Eastern Urban Loop
From US 70 Relocation to SR 2303 (Lawndale Drive)
in Guilford County, North Carolina

Project Description and Brief History

The Greensboro Eastern Urban Loop is a pipeline project for which the environmental documents were completed before the NEPA/404 Merger process was initiated. Information concerning the documents' approval dates is listed below:

- Draft Environmental Impact Statement (DEIS) August 19, 1992
- Final Environmental Impact Statement (FEIS) August 12, 1994
- Record of Decision (ROD) March 7, 1995

The proposed action for the FEIS is the construction of the Greensboro Eastern Urban Loop, a multi-lane freeway. The proposed limits are from north of the interchange with I-85 and the proposed I-85 Bypass to Lawndale Drive north of Greensboro. The project is approximately 12.1 miles in length. The selected alternative is the Middle Alternative. This alternative and its anticipated impacts are fully discussed in the DEIS and abbreviated FEIS. A portion of this project, U-2525A, has already been constructed.

The main purposes of the proposed Greensboro Eastern Urban Loop are to provide an efficient circumferential connection for major arterial thoroughfares such as I-85, I-40, US 29 and US 70; and to improve service for local traffic in Eastern and Northern Greensboro/Guilford County. The project will also connect to other portions of the planned Greensboro Urban Loop.

A meeting was held in the summer of 2005 to discuss how this project should be integrated into the Merger 01 process. North Carolina Department of Transportation (NCDOT), Army Corps of Engineers (USACOE), Division of Water Quality (DWQ) and State Historic Preservation Office (HPO) staff attended this meeting. The group agreed that Segment A of the project (U-2525A) has already been constructed; therefore, the possibility of utilizing the other alternatives is limited. This establishes the Middle Alternative as the LEDPA by elimination. The group agreed that the project should enter the Merger 01 process at Concurrence Point 2A/4A.

Avoidance and Minimization

A field meeting was held in January 2006 to provide an opportunity for the resource agencies and NCDOT staff to see and comment on the major stream crossings on the project. Seven sites were visited. The minutes of the meeting are included in this merger meeting packet. As a result of the field meeting, NCDOT investigated several options to further minimize and/or avoid impacts in the study corridor.

- *Site 2: Investigate shifting the –L– alignment to minimize impacts.*
  This area is near the Huffine Mill interchange; the alignment cannot be adjusted because of its proximity to the US 70 interchange that is already constructed.

- *Site 5: Investigate shifting the –L– alignment south to center up the road in the NCDOT-owned property possibly reducing the necessary culvert length.*
  NCDOT was able to shift the alignment 50' south minimizing stream impacts and reducing the culvert length. Property is being developed further south, so a greater alignment shift is not practical.

- Site 6: *Investigate shifting the –L– alignment north to reduce impacts to 3 streams/tributaries.*
  NCDOT designed a more northerly alignment; however, this realignment required relocating 8 additional homes. In this area, NCDOT recommends maintaining the alignment shown at the field meeting.

- The interchange with the Elm Street Extension has been modified. The ramp in the northwest quadrant was eliminated. A loop was added to the northeast quadrant. This reduced the stream impacts at this interchange.

The project was reviewed for hazardous spill basins needs. The area between stations , 337+75-L- and 420+00-L- falls within 1/2 mile of the critical area for a water supply. There are roughly 2 box culverts and 2 pipe crossings that fall between these stations. We anticipate that each one will require two hazardous spill basins.

Since the field meeting, Mr. Craig McKinney, Greensboro MPO representative, has provided information regarding Greensboro's future urbanization plans to NCDOT. The Hydraulic Structure Requirements have been updated based on this information as detailed below.

Future urbanization of the drainage areas for Sites 1 through 7 have resulted in all seven culverts being increased in size from single to double barrel culverts (see attached table). Additionally, 5 pipe culverts that were smaller than 72 inches, now fall into the box culvert range. Sites 8 through 12 have been added to the attached table as single barrel box culverts. Site 13 previously contained a pipe and a grade separation bridge; now the bridge will be extended 40 feet to encompass the stream and eliminate a potential box culvert. Table A (below) summarizes impacts at all the culvert and bridge sites based on

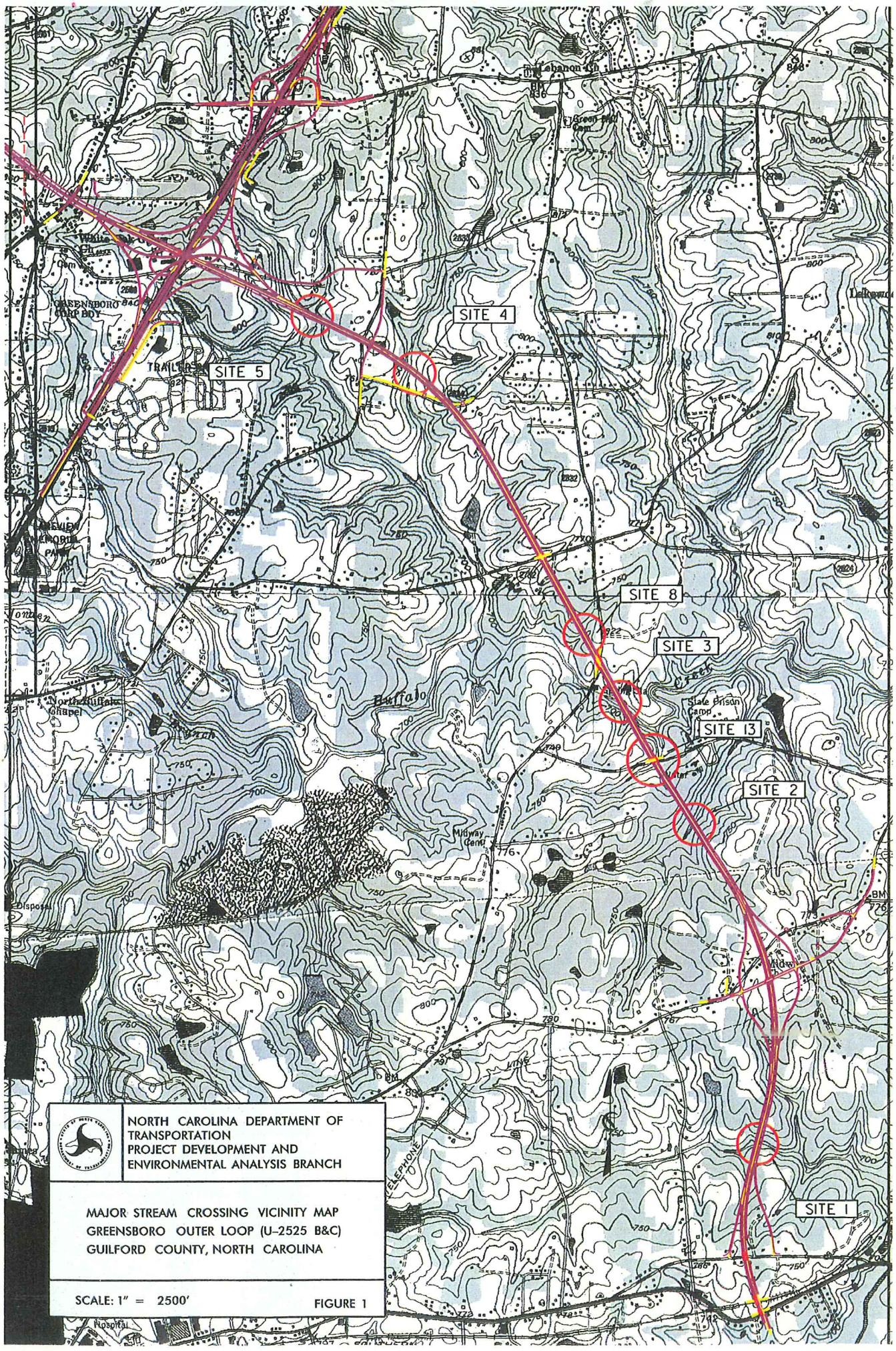
the current design. Figures 1 and 2 show all the culvert and bridge locations from this table. Following the figures are aerial photos showing the proposed design and photos of the streams at the additional sites that we did not visit in the January field meeting.

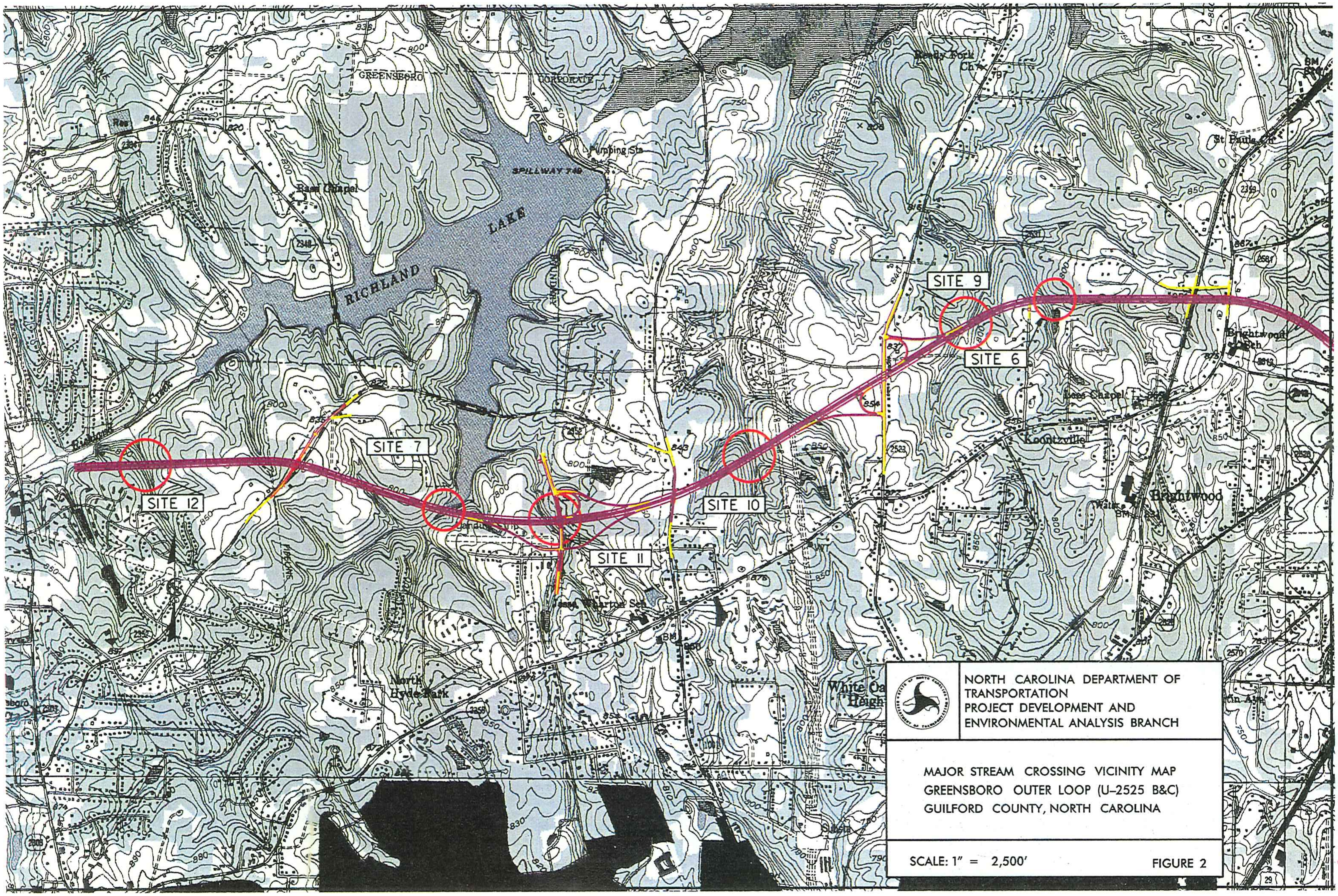
A private consulting firm prepared tables with stream and wetland data based on the corridor limits. Figures showing all stream and wetland locations (labeled as MACTEC Figures 2 through 4) follow the tables.

Figure A U-2525B&C MAJOR STREAM CROSSING DATA

SITE #	STREAM	STATION	STRUCTURE	LENGTH (linear ft)	CLASSIFICATION	DWQ
1	UT South Buffalo Cr.	48+37-L-	2@9X9RCBC	347.2	Perennial	N/A
2	UT North Buffalo Cr.	115+00-L-	2@7X7RCBC	235.0	Perennial	N/A
3	North Buffalo Cr.	143+00-L-	Dual 500ft.x 48ft.bridges	N/A		
4	UT North Buffalo Cr.	218+30-L-	2@7X7RCBC	314.9	Perennial	36.25
5	UT North Buffalo Cr.	241+20-L-	2@7X7RCBC	551.3		
6	UT Richlands Cr.	364+90-L-	2@6X6RCBC	593.7	Perennial	N/A
7	UT Richlands Cr.	493+85-L-	2@9X9RCBC	628.7		
8	UT North Buffalo Cr.	157+00-L-	1@6X6RCBC	265.8	Perennial	36.25
9	UT Richlands Cr.	382+75-L-	1@6X6RCBC	703.9	Perennial	38.5
10	UT Richlands Cr.	431+63-L-	1@5X6RCBC	388.4		
11	UT Richlands Cr.	472+55-L-	1@7x7RCBC	276.2	Perennial	N/A
12	UT Richlands Cr.	552+55-L-	1@7X7RCBC	276.4		
13	UT North Buffalo Cr.	129+38-L-	Dual 150ft.x 48ft.bridges	N/A		

Notes:
1. RCBC = Reinforced Concrete Box Culvert
2. Culvert size and bridge length are subject to change based on final hydraulic recommendations.
3. The table indicates all drainage structures 72 inch and above.
4. Structures at Sites 6, 7, 9, 10, 11, and 12 are on U-2525C.


SITE 4
SITE 5
SITE 8
SITE 3
SITE 13
SITE 2
SITE 1
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH
MAJOR STREAM CROSSING VICINITY MAP
GREENSBORO OUTER LOOP (U-2525 B&C)
GUILFORD COUNTY, NORTH CAROLINA
SCALE: 1" = 2500'
FIGURE 1

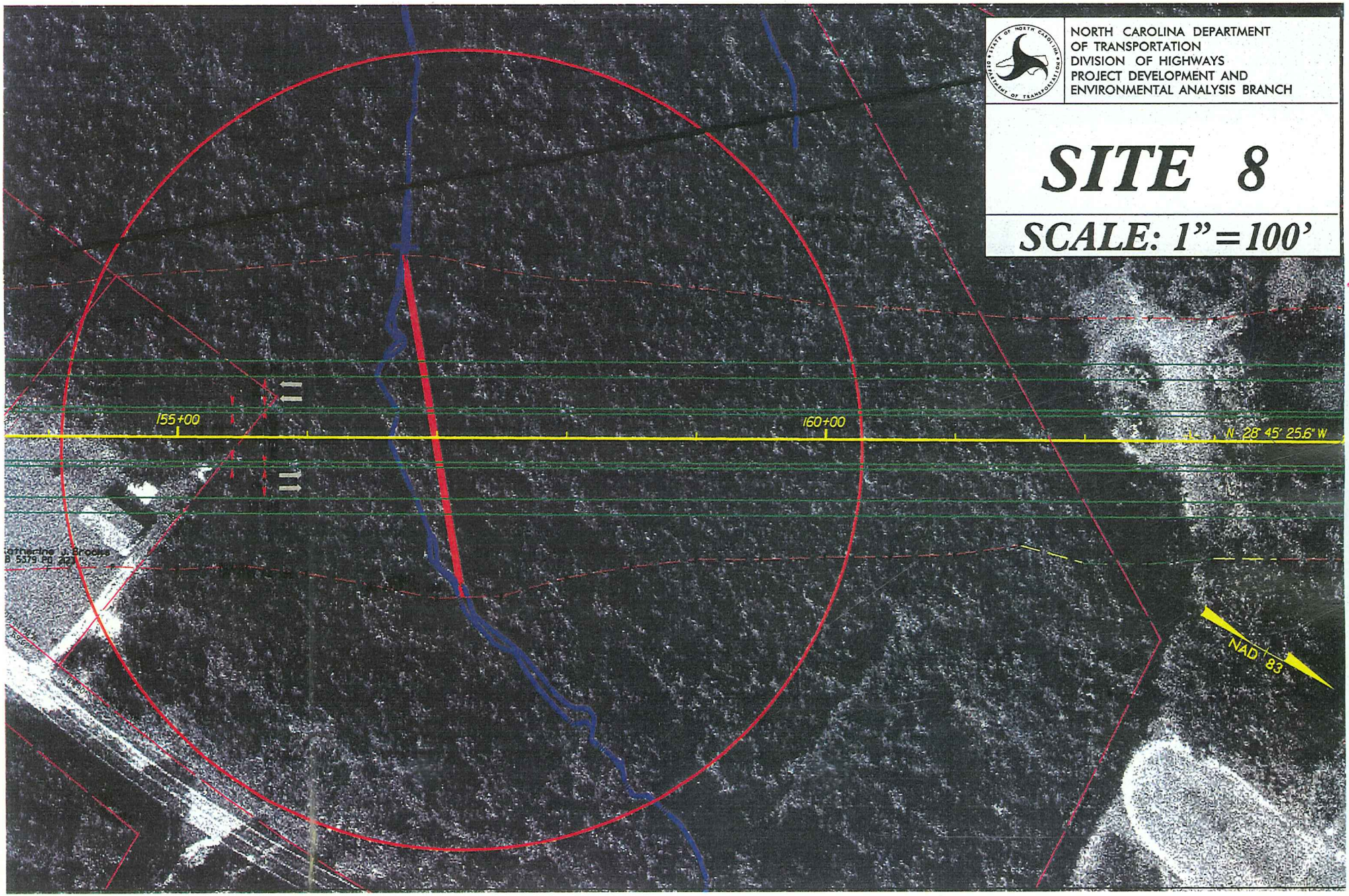


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

MAJOR STREAM CROSSING VICINITY MAP
GREENSBORO OUTER LOOP (U-2525 B&C)
GUILFORD COUNTY, NORTH CAROLINA

SCALE: 1" = 2,500'

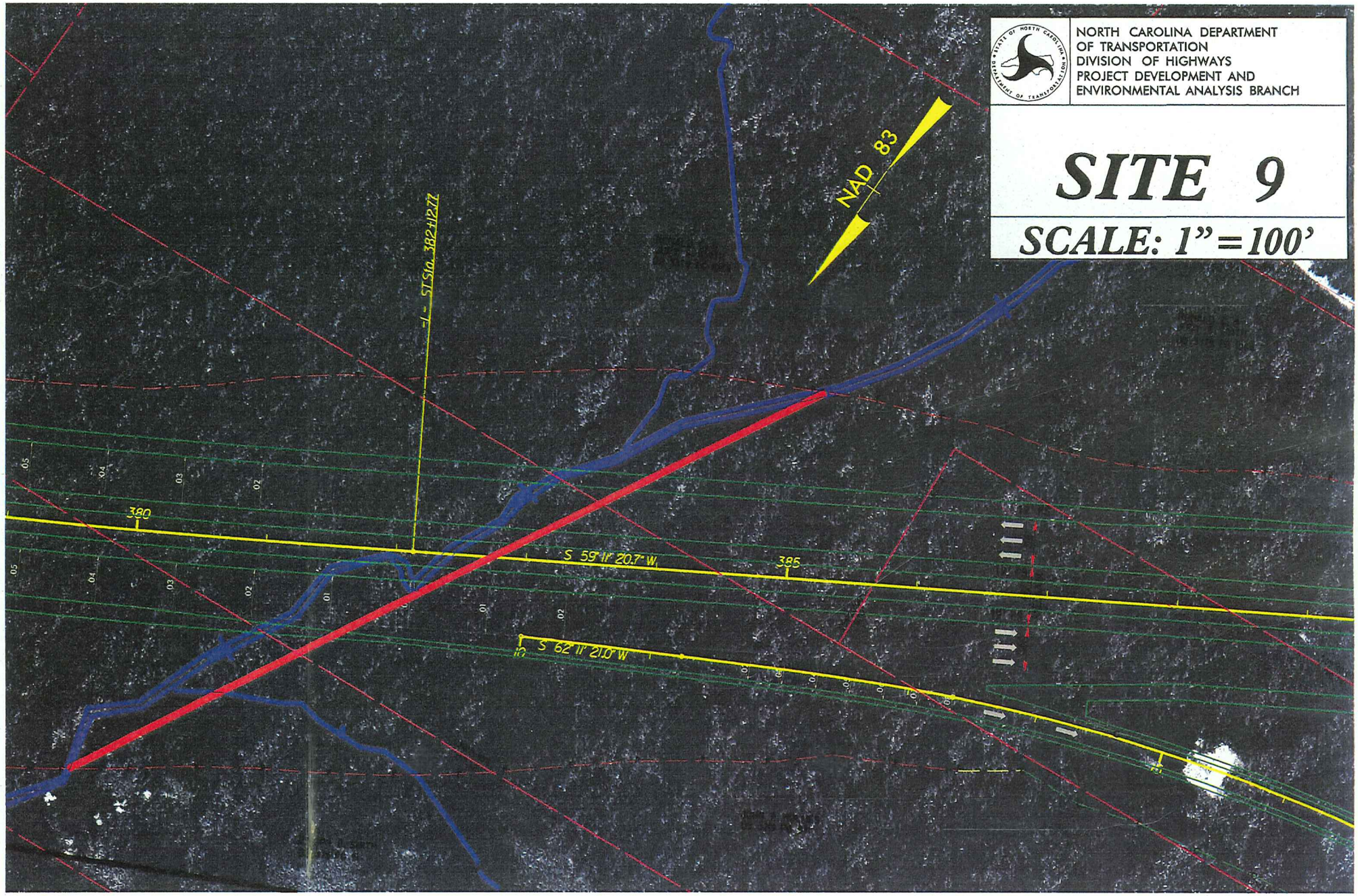
FIGURE 2


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
SITE 8
SCALE: 1" = 100'
155+00
160+00
N 28° 45' 25.6" W
NAD 83

SITE 8

UT North Buffalo Creek, Sta. 157+00

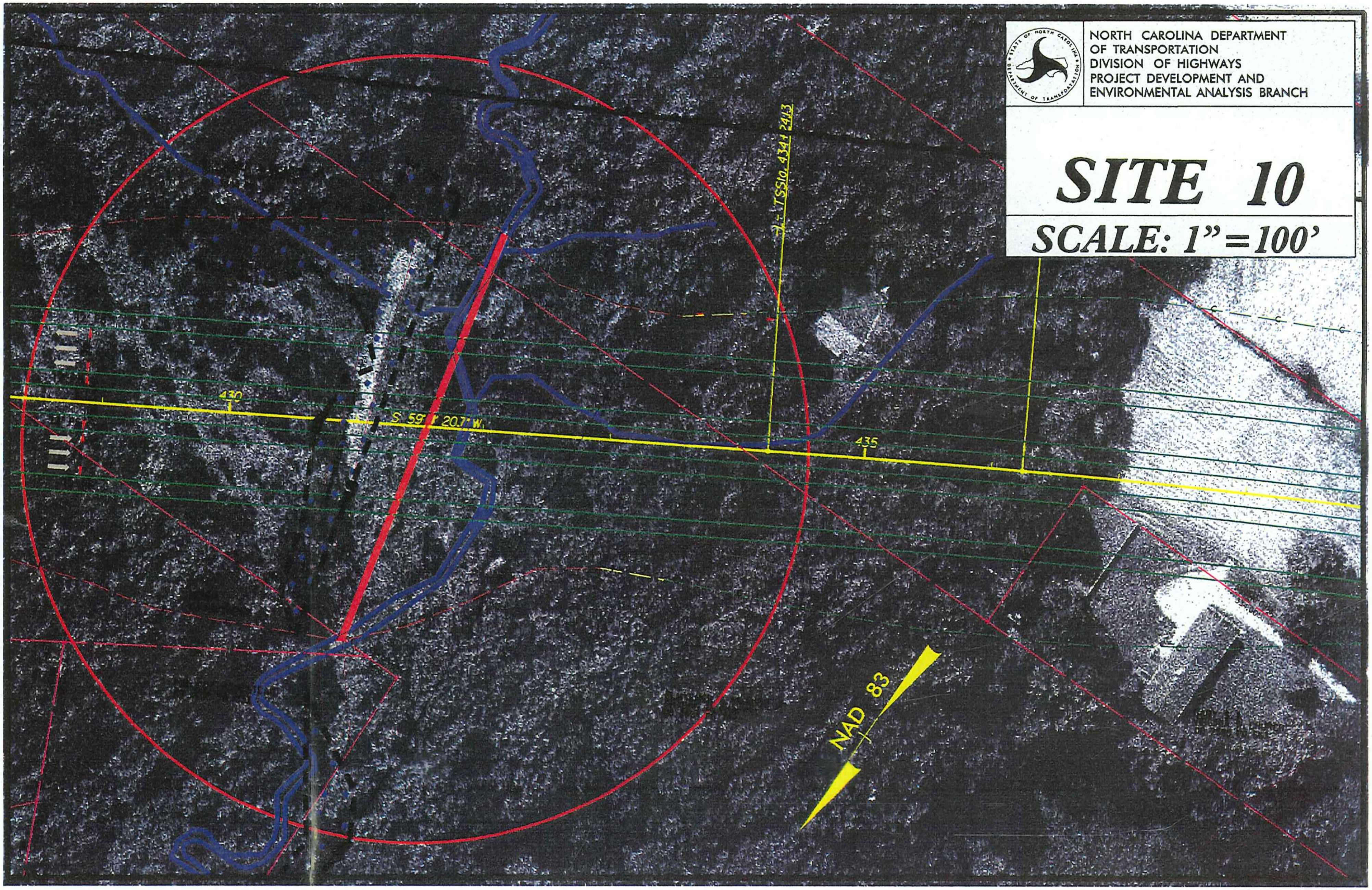
UT North Buffalo Creek, Sta. 157+00 looking upstream


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
SITE 9
SCALE: 1"=100'
NAD 83
-L- STA 10+382.77
380
385
S 59° 11' 20.7" W
S 62° 11' 21.0" W

SITE 9

UT Richlands Creek, Sta. 382+75 looking downstream

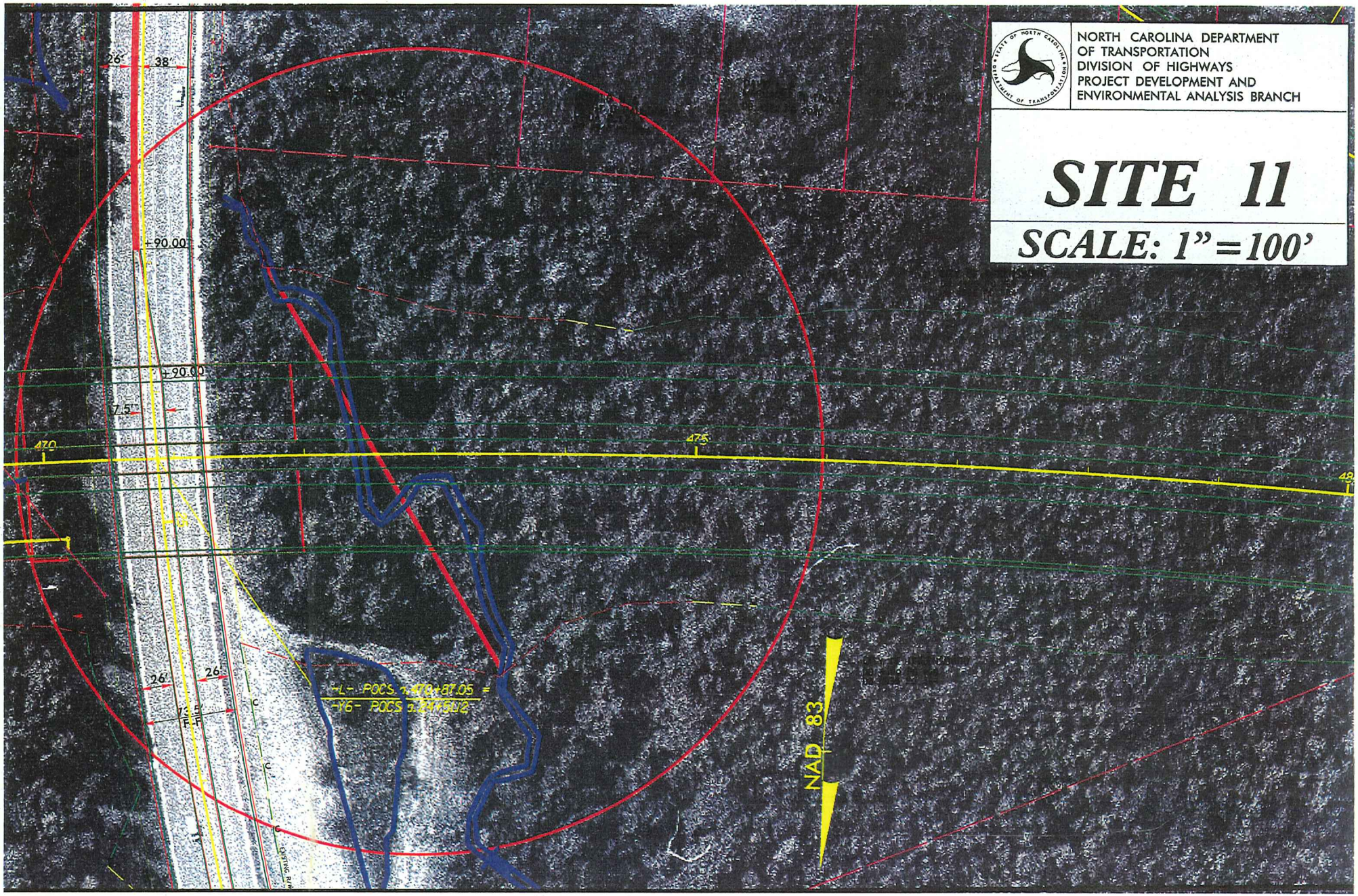
UT Richlands Creek, Sta. 382+75, looking upstream


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
SITE 10
SCALE: 1" = 100'
430
435
NAD 83

SITE 10

UT Richlands Creek, Sta. 431+63 looking downstream

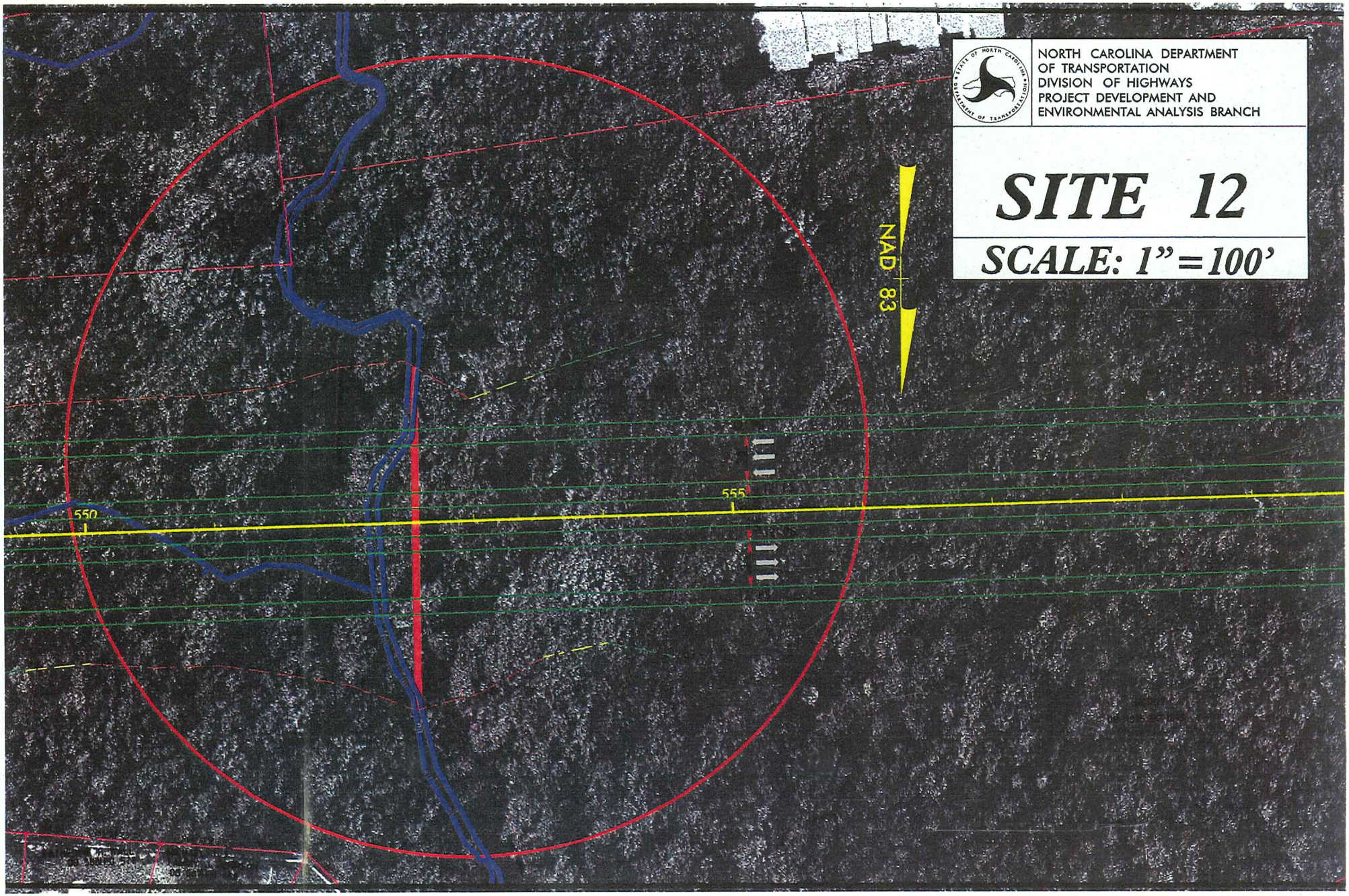
UT Richlands Creek, Sta. 431+63 looking upstream


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
SITE 11
SCALE: 1"=100'
NAD 83
26'
38'
+90.00
+90.00
7.5'
470
475
26'
26'
-L- POCS
-Y6- POCS

SITE 11

UT Richlands Creek, Sta. 472+55 looking downstream

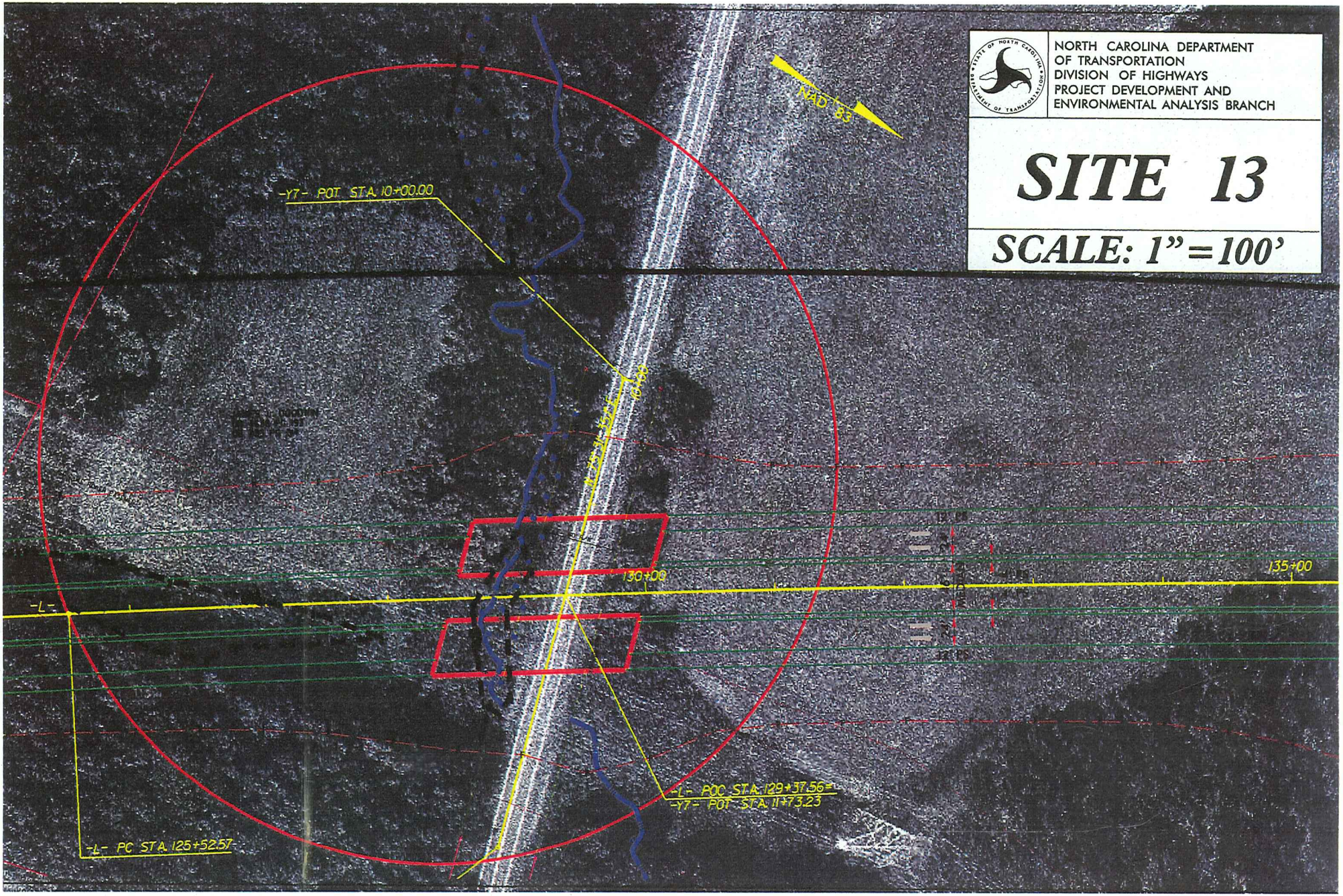
UT Richlands Creek, Sta. 472+55, looking upstream


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
SITE 12
SCALE: 1"=100'
NAD 83
550
555

SITE 12

UT Richlands Creek, Sta. 552+55 looking downstream

UT Richlands Creek, Sta. 552+55 looking upstream



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH

SITE 13

SCALE: 1"=100'

SITE 13

UT North Buffalo Creek, Sta. 129+38 looking upstream

UT North Buffalo Creek, Sta. 129+38 looking upstream

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

February 7, 2006

MEMORANDUM TO: Meeting Participants

FROM: Edwin A. Peters
Project Development Engineer

SUBJECT: Meeting Minutes for U-2525 B & C, Greensboro Eastern and Northern Urban Loop, I-85 Bypass East of Greensboro to Lawndale Drive, North of Greensboro in Guilford County, North Carolina

On Thursday, January 5, 2006 a Concurrence Point 2A/4A Field Meeting was held for the subject project. The attendees of the meeting were as follows:

Edwin Peters	PDEA
Drew Joyner	PDEA
Ryan Hough	PDEA
Brett Feulner	PDEA/Natural Environment Unit
Bill Barrett	PDEA/Natural Environment Unit
Brad Wall	Division 7
Jerry Parker	Division 7
Danny Gardner	Roadway
James Speer	Roadway
John Gauthier	Roadway
Piotr Stojda	Roadway
Eddie Douglas	Roadway
Randy Henegar	Hydraulics
Craig McKinney	Greensboro MPO
Jennifer Parish	Roadside Environmental Unit
Mark Staley	Roadside Environmental Unit
Chris Militscher	USEPA
Kathy Mathews	USEPA
Travis Wilson	NCWRC
Gary Jordan	USFWS
John Thomas	USACE
Sue Homewood	DWQ

The objective of the meeting was to afford the resource agencies the opportunity to see and comment on the major stream crossing sites proposed by NCDOT for this project as a precursor to a 2A/4A office meeting. Seven sites were visited (See attached Figures 1 and 2)

Major topics of discussion are shown below.

General Comments that apply to all sites:

Gary Jordan and Travis Wilson recommended that an 8'x8' be a minimum barrel size to help with wildlife passage. Also, the use of fencing at culvert sites will also encourage wildlife movement and improve passage through the culverts.

Bottomless culverts should be considered if geotechnical investigations prove that bedrock is present.

Please consider natural stream design at crossings where the impacts to the stream run parallel with the road.

Site 1:
The 10'x10' RCBC is OK hydraulically per Randy Henegar (Randy), but a double barrel RCBC with sill in upstream barrel will be considered. Impacts to the tributary stream at Site 1 will require mitigation.

Site 2:
Chris Militscher requested NCDOT investigate if the -L- alignment could be shifted slightly in an effort to minimize impacts. The 7'x7' RCBC is OK per Randy, but we will take another look at the size, which may end up being a double barrel culvert.

Site 3:
The recommended bridges were okay with all present. Randy commented that the final recommended bridges might be longer than the presently recommended 500' bridges.

Site 4:
Consider a double barrel culvert with sills in upstream barrel. An existing beaver dam is located near this crossing.

Site 5:
A request was made of NCDOT to look at shifting the -L- alignment south if possible to center up in the property that NCDOT currently owns- might help in reducing culvert length. If alignment shift is not possible, then look at stream channel relocation within the NCDOT property.

Site 6
A request was made of NCDOT to look at shifting the -L- alignment north if possible to reduce the impacts to where 3 steams/tributaries come together at the crossing. From the property that NCDOT currently owns south of the crossing, potential on-site mitigation is possible. Proposed on-site mitigation.

Site 7
The 10'x10' RCBC will work hydraulically, but the team asked NCDOT to please consider a double barrel culvert to help with wildlife passage.

The 2A/4A Field Meeting was adjourned. NCDOT will investigate the feasibility of the agency field comments and will present its findings at the upcoming Concurrence Point 2A/4A meeting in Raleigh.

U-2525 B &C
Wetland and Stream Data Tables and Figures

Table 1. U-2525B NCDOT Surveyed Wetlands.

Site ID	Acres	NWI Code*	Classification**	Sheet No.	NCDOT Stations
A	0.01	PFO1	NR	B-21	267+00 to 267+50
AA	0.04	PFO1	R	B-4	36+50 to 37+50
B	0.03	PFO1	NR	B-21	266+00 to 267+00
BB	0.53	PFO1	R	B-4	33+25 to 36+50
C	0.99	PFO1	NR	B-21	261+25 to 265+75
D	0.02	PFO1	NR	B-21	266+75 to 267+50
E	0.03	PFO1	R	B-23	296+75 to 297+75
F	0.00	PEM1	R	B-22	285+00 to 286+00
G	0.23	PFO1	R	B-21	272+50 to 274+25
H	0.14	PFO1	R	B-21	271+50 to 273+50
I	0.48	PFO1	R	B-21	276+50 to 279+00
J	0.08	PFO1	NR	B-19	231+25 to 232+25
K	0.06	PFO1	NR	B-14	174+75 to 175+50
L	0.07	PFO1	R	B-10	128+50 to 129+25
M	0.33	PEM1	NR	B-10	123+25 to 128+00
N	0.25	PFO1	NR	B-9	116+25 to 117+25
O	0.27	PFO1	NR	B-9	114+00 to 115+50
P	0.80	PFO1	NR	B-8	96+50 to 101+50
Q	0.93	PFO1	NR	B-8	93+75 to 95+25
R	0.30	PFO1	R	B-25	80+75 to 83+25
S	0.47	PEM1	NR	B-7	80+50 to 82+50
T	0.64	PEM1	NR	B-7	77+25 to 81+50
U	0.02	PFO1	NR	B-5	48+75 to 49+25
V	0.06	PFO1	NR	B-5	47+00 to 47+50
W	0.02	PFO1	NR	B-5	44+25 to 44+75
X	0.03	PFO1	NR	B-5	42+75 to 43+25
Y	0.12	PFO1	R	B-5	38+75 to 40+25
Z	0.02	PFO1	R	B-4	37+75 to 38+25
Total	**6.95**	**acres**			

* NWI Code Descriptions:
PEM1 = Palustrine, Emergent, Persistent
PF01 = Palustrine, Forested, Broad-Leaved Deciduous

** Wetland Classification:
R = Riverine
NR = Non-Riverine

Table 2. U-2525B&C MACTEC Surveyed Wetlands.

Site ID	Acres	NWI Code*	NCDWQ Wetland Rating Score	Classification**	Sheet No.	NCDOT Stations
AW1	0.45	PF01	47	NR	B-4	29+25 to 31+00
AW1	3.03	PF01	47	NR	B-4	27+00 to 35+75
AW2	4.17	PF01	34	R	B-8	92+00 to 95+50
AW3	4.84	PF01	30	NR	B-8	94+75 to 102+75
AW4	0.39	PF01	30	NR	B-8	99+00 to 102+00
AW5	0.02	PF01	42	R	B-9	116+00 to 117+00
AW6	0.02	PF01	42	R	B-9	115+50 to 116+50
AW7	0.01	PF01	63	R	B-10	130+25 to 130+50
AW8	0.03	PF01	69	R	B-12	145+50 to 146+25
AW9	0.05	PF01	49	R	B-11	142+75 to 143+50
AW10	0.12	PF01	58	R	B-16	196+50 to 197+25
AW11	0.02	PF01	38	R	B-18	218+50 to 219+25
AW12	0.04	PF01	61	NR	B-18	219+00 to 219+25
AW13	0.54	PF01	31	R	B-18	219+50 to 222+25
AW14	0.41	PF01	57	R	B-32	61+50 to 63+25
AW15	0.11	PF01	43	R	B-32	64+25 to 65+25
AW16	0.47	PF01	43	NR	B-33	76+25 to 79+00
AW17	0.15	PF01	51	NR	B-33	99+00 to 100+75
AW18	0.15	PF01	39	R	C-6	342+50 to 344+00
AW19	0.02	PF01	26	R	C-8	365+50 to 366+00
AW20	0.11	PF01	40	R	C-8	364+00 to 365+00
AW22	0.05	PF01	45	R	C-12	438+75 to 439+50
AW23	0.01	PF01	26	R	C-16	508+25 to 508+75
AW24	0.03	PFO1	53	R	C-15	494+25 to 494+75
AW25	0.31	POW	80	R	C-15	489+00 to 493+25
AW26	0.24	PF01	34	R	C-18	531+25 to 532+75
AW27	0.99	PF01	44	R	C-20	560+75 to 565+50
BW1	0.61	PF01	30	NR	B-4	24+50 to 27+25
BW2	0.02	PF01	28	NR	B-4	12+75 to 13+25
BW3	0.07	PF01	28	NR	B-4	15+00 to 16+00
BW4	0.44	PF01	35	NR	B-4	21+50 to 25+75
BW5	0.21	PF01	35	NR	B-4	15+50 to 16+50
BW6	0.33	PF01	41	NR	B-4	12+50 to 14+75
BW7	0.08	PF01	48	R	B-5	45+25 to 45+75
BW8	0.14	PF01	48	R	B-5	46+50 to 47+25
BW9	0.08	PF01	54	R	B-7	15+00 to 18+00
BW10	0.02	PF01	54	R	B-7	70+25 to 71+50
BW11	0.08	PF01	37	NR	B-7	71+25 to 71+75

Site ID	Acres	NWI Code*	DWQ Wetland Rating Score	Classification**	Sheet No.	NCDOT Stations
BW12	0.13	PF01	47	R	B-9	112+50 to 113+75
BW13	0.35	PF01	48	R	B-9	112+00 to 114+50
BW14	0.17	PF01	35	R	B-10	128+50 to 129+50
BW16	0.15	PF01	48	R	B-10	128+50 to 129+25
BW17	0.25	PF01	49	NR	B-15	180+50 to 183+25
BW18	0.02	PF01	63	R	B-14	174+75 to 175+00
BW19	0.03	PF01	31	NR	B-17	214+50 to 215+00
BW20	0.08	PF01	39	R	B-18	219+75 to 220+50
BW21	0.06	PF01	44	NR	B-19	230+50 to 231+25
BW22	0.02	PF01	35	R	B-21	279+25 to 279+50
BW23	0.03	PF01	57	R	B-21	273+50 to 274+50
BW24	0.63	PF01	44	NR	B-21	281+25 to 285+25
BW25	0.15	PF01	40	NR	B-23	296+50 to 297+50
BW26	0.25	PF01	53	NR	B-23	301+25 to 304+00
BW27	0.16	PF01	36	NR	B-23	305+25 to 306+50
BW28	0.03	PF01	35	NR	B-23	307+25 to 308+25
BW29	0.06	PF01	43	NR	B-23	307+25 to 307+75
BW30	0.38	PF01	49	R	C-4	315+25 to 316+50
BW31	0.49	PF01	49	NR	C-12	429+50 to 431+75
BW32	0.17	PF01	55	R	C-11	420+25 to 421+25
BW33	0.10	PF01	48	NR	C-12	430+50 to 431+50
BW34	0.01	PF01	25	R	C-16	506+25 to 506+75
BW35	0.39	POW	80	N/A	C-15	490+25 to 493+50
Total	**22.94**	**Acres**				

* NWI Code Descriptions:
N/A = Not Applicable
PEM1 = Palustrine, Emergent, Persistent
POW = Palustrine, Open Water/Unknown Bottom

** Wetland Classification:
R = Riverine
NR = Non-Riverine

Table 3. U-2525B&C NCDOT Surveyed Stream Classifications.

Site ID	Breakpoint	DWQ Score*	Northing	Easting	Other Determination
AS1 EI	Intermittent	23.50	853292.973	1793684.389	
AS2 P	Perennial	32.00	872650.856	1784181.941	
AS3 EI	Intermittent	26.00	873808.058	1784258.685	
AS3 IP	Perennial	N/A	872980.148	1783779.881	DWQ & USACE field review
AS5 EI	Intermittent	28.25	875860.396	1785576.491	
AS6 IP	Perennial	N/A	871187.232	1764573.796	2001 MACTEC breakpoint
AS7 IP	Perennial	N/A	871691.674	1767510.681	2001 MACTEC breakpoint
AS8 IP	Perennial	N/A	870571.967	1763015.329	2001 MACTEC breakpoint
BS1 P	Perennial	29.00	857188.761	1794112.291	
BS2 EI	Intermittent	26.50	866878.029	1789718.394	
BS3 EI	Intermittent	25.50	859672.044	1793327.831	
BS4 EI	Intermittent	27.50	865907.244	1789715.435	
BS5 P	Perennial	34.00	869941.656	1787470.176	
BS6 EI	Intermittent	27.50	870142.078	1786080.992	
BS7 I	Intermittent	19.50	869108.095	1786467.364	
BS9 EP	Perennial	28.50	873645.588	1779963.293	
CDS07 P	Perennial	32.25	871499.814	1768784.372	
CDS10 EI	Intermittent	23.00	874644.582	1775369.614	
CDS11 P	Perennial	31.25	874193.518	1776586.640	
CDS12 P	Perennial	33.75	872103.866	1769803.384	
CS01 I	Intermittent	19.00	871119.930	1755037.242	
CS01 IP	Perennial	N/A	871111.297	1754924.202	Confluence with USGS mapped stream
CS04 EI	Intermittent	28.00	871116.460	1757246.297	
CS09 P	Perennial	38.50	873187.433	1771825.229	
CS10 I	Intermittent	26.00	873703.657	1772480.240	
CS10 IP	Perennial	29.50	873964.156	1772352.916	
CS11 I	Intermittent	26.25	874433.820	1772074.513	
CS11 IP	Perennial	N/A	874387.916	1772525.460	Confluence with USGS mapped stream
CS12 EI	Intermittent	26.50	874692.453	1772707.618	
CS14 P	Perennial	34.75	874188.009	1774100.683	
CS16 EP	Perennial	N/A	874538.533	1774644.694	Confluence with USGS mapped stream
CS18 EP	Perennial	N/A	874762.627	1776667.221	Wetland interface
CS19 I	Intermittent	22.50	873863.245	1778506.806	
CS19 IP	Perennial	N/A	873915.466	1778495.637	Confluence with USGS mapped stream
CS21 EI	Intermittent	24.00	873231.467	1780566.837	
CS21 IP	Perennial	32.00	873568.746	1780553.109	
CS22 EI	Intermittent	N/A	872614.317	1781434.097	DWQ field review
CS23 EI	Intermittent	22.50	872322.940	1781502.857	
CS23 IP	Perennial	N/A	872319.835	1781765.362	DWQ field review
CS24 P	Perennial	30.75	873438.167	1783444.225	
CS26 EP	Perennial	29.00	875226.662	1784264.258	
CS27 P	Perennial	33.50	876630.057	1785703.157	
CS29 I	Intermittent	27.00	877214.688	1786455.185	
CS29 IP	Perennial	30.00	877275.676	1786406.912	
CS30 P	Perennial	35.75	876659.178	1786117.229	

Site ID	Breakpoint	DWQ Score	Northing	Easting	Other Determination
CS31 EP	Perennial	30.50	875415.297	1785634.611	
CS36 P	Perennial	29.50	868483.948	1780649.594	
CS38 P	Perennial	N/A	871365.180	1784964.854	2005 MACTEC breakpoint upstream
CS39 P	Perennial	30.50	871007.450	1785547.335	
CS40 P	Perennial	41.25	870118.584	1784318.326	
CS42 P	Perennial	36.25	870100.701	1787402.712	
CS44 EI	Intermittent	25.50	868795.363	1787897.955	
CS47 I	Intermittent	21.00	868459.742	1788975.045	
CS47 IP	Perennial	28.25	867592.332	1788749.861	
CS47A I	Intermittent	18.00	868369.019	1789025.260	
CS48 P	Perennial	31.75	867547.729	1789456.606	
CS50 EP	Perennial	31.00	864859.022	1789896.059	
CS52 EI	Intermittent	23.00	864745.023	1790880.045	
CS52 IP	Perennial	N/A	864180.343	1790275.779	Confluence with 5th-order USGS mapped stream
CS54 P	Perennial	34.75	861745.681	1791647.268	
CS55 P	Perennial	N/A	860397.917	1792456.336	3rd-order USGS mapped stream
CS56 EI	Intermittent	23.00	857341.540	1793981.789	
CS56 IP	Perennial	33.75	857147.994	1793997.622	
CS57 EI	Intermittent	25.50	853305.880	1793690.044	
CS57 IP	Perennial	29.75	853485.645	1793781.524	
CS57A P	Perennial	N/A	854418.262	1793507.277	3rd-order USGS mapped stream

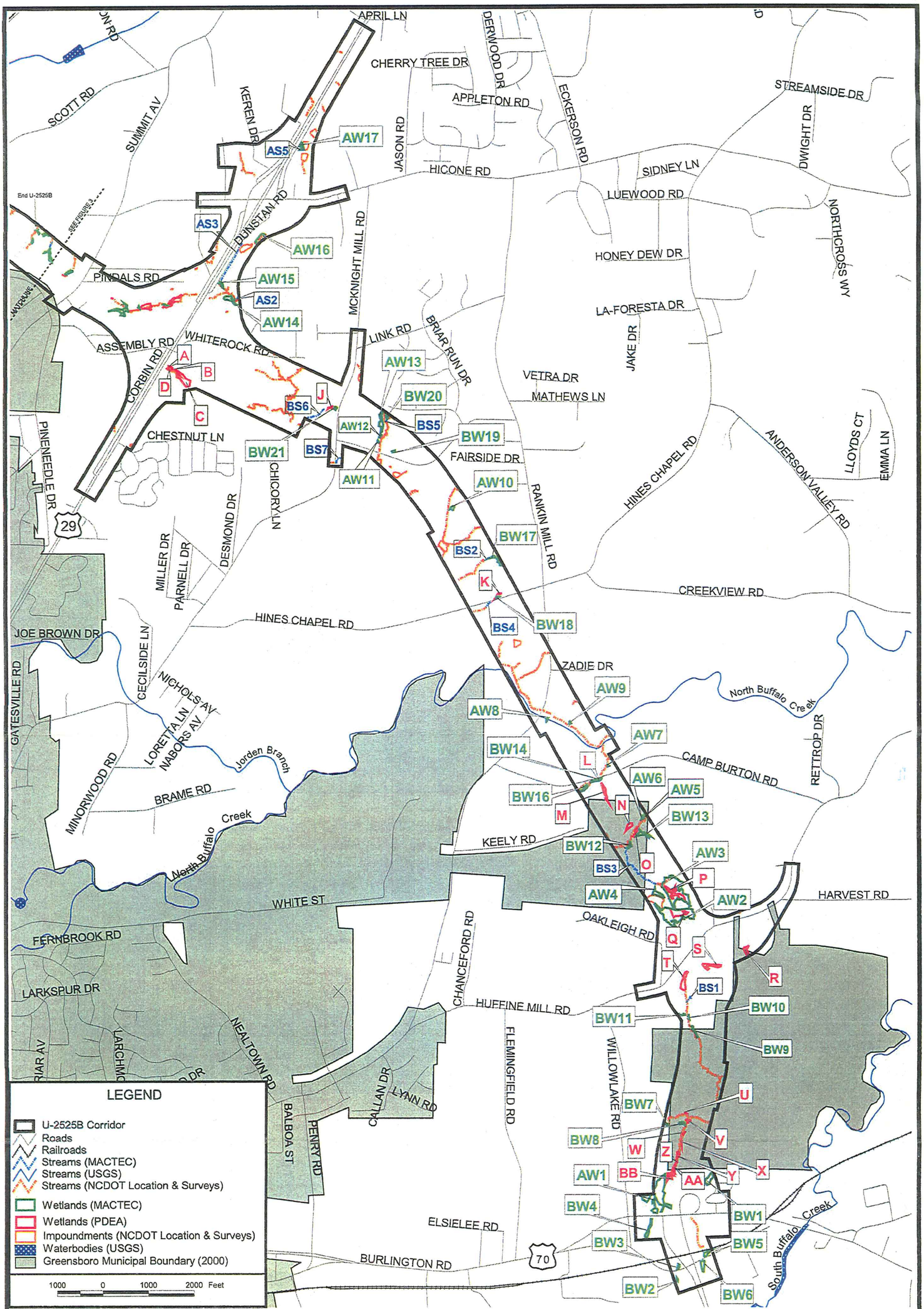
* N/A = Stream not scored using DWQ Stream Identification form

Table 4. U-2525B&C MACTEC Surveyed Streams.

Site ID	Length (Linear Feet)*	Classification	DWQ Score**	Stations
AS2	100	Perennial	32	63+25 to 64+25
AS3	1080	Intermittent	26	64+50 to 75+00
AS5	63	Intermittent	28.25	99+25 to 99+50
AS6	95	Perennial	MA	469+00 to 470+00
AS6	248	Perennial	MA	470+25 to 473+00
AS7	657	Perennial	MA	433+50 to 439+50
AS7	323	Perennial	MA	429+75 to 432+50
AS8	338	Perennial	MA	486+75 to 489+25
BS1	192	Perennial	29	74+25 to 75+50
BS2	151	Intermittent	26.5	183+25 to 183+50
BS3	1289	Intermittent	25.5	102+50 to 113+25
BS4	165	Intermittent	27.5	174+25 to 174+75
BS5	96	Perennial	34	219+75 to 220+25
BS6	497	Intermittent	27.5	232+75 to 235+50
BS7	242	Intermittent	19.5	223+75 to 224+50
BS9	272	Perennial	28.5	303+25 to 303+75
Total	**5,807 Linear Feet**			

* Lengths are approximations based on CAD and GIS analysis

** Denotes total score on NC DWQ Stream Identification Form
MA = Based on 2001 MACTEC Stream Identification



Scale: 1" = 2,000'
Source: City of Greensboro, NCGIA, NCDOT

Prepared: / Date: AKD 9.9.05
Checked: / Date: 9.9.05

Stream & Wetland Delineations
Greensboro Outer Loop (U-2525 B&C)
Guilford County, North Carolina

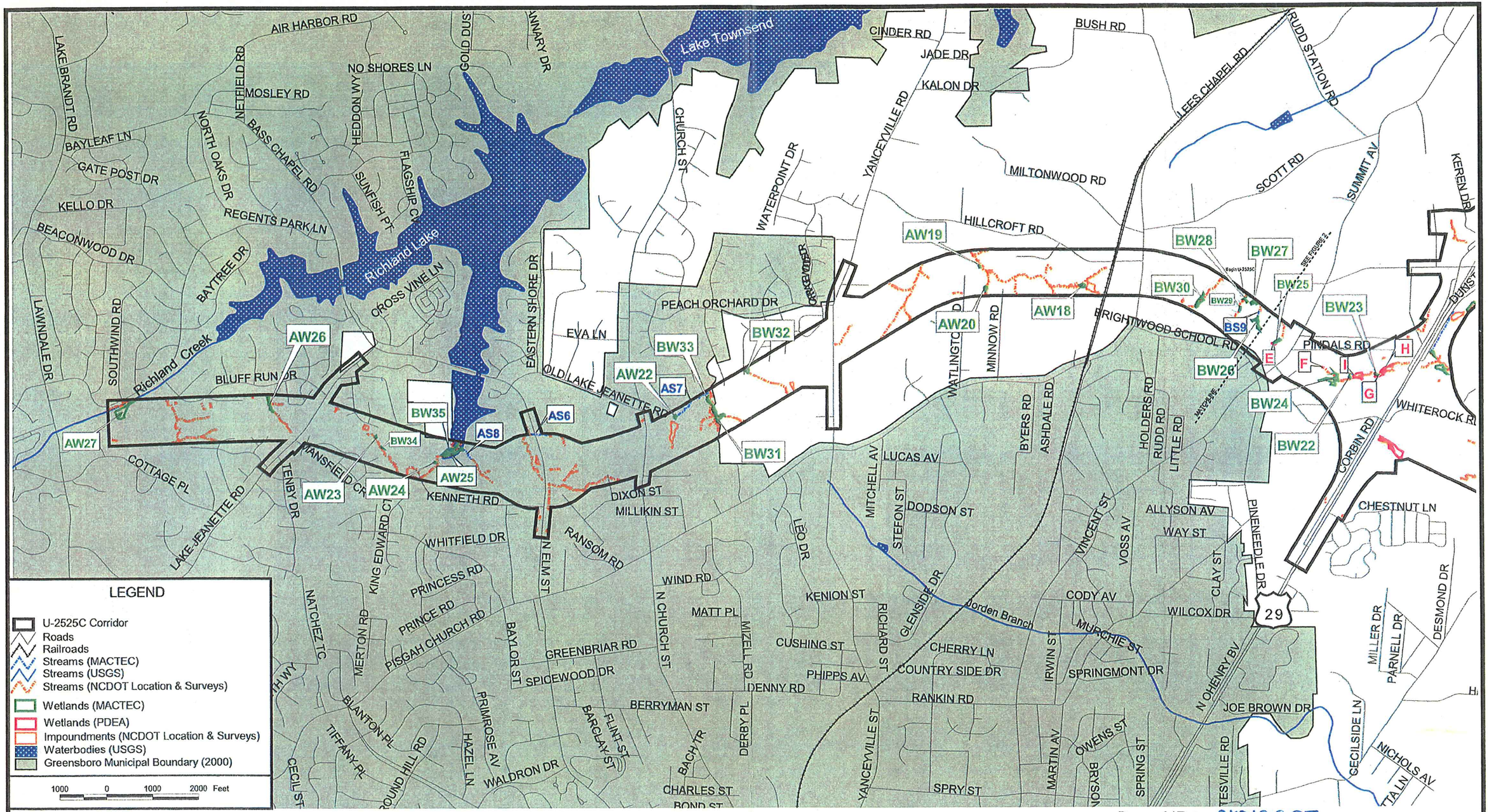
Prepared For:

MACTEC

U-2525 B Jurisdictional Waters

Project 6470-05-1056

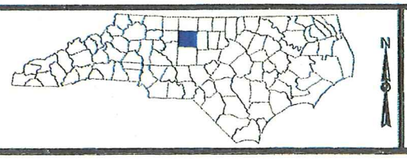
Figure 2



Scale: 1" = 2,000'
Source: City of Greensboro, NCGIA, NCDOT

Prepared / Date: AKD/9.9.05
Checked / Date MH 9.9.05

Stream & Wetland Delineations
Greensboro Outer Loop (U-2525 B&C)
Guilford County, North Carolina



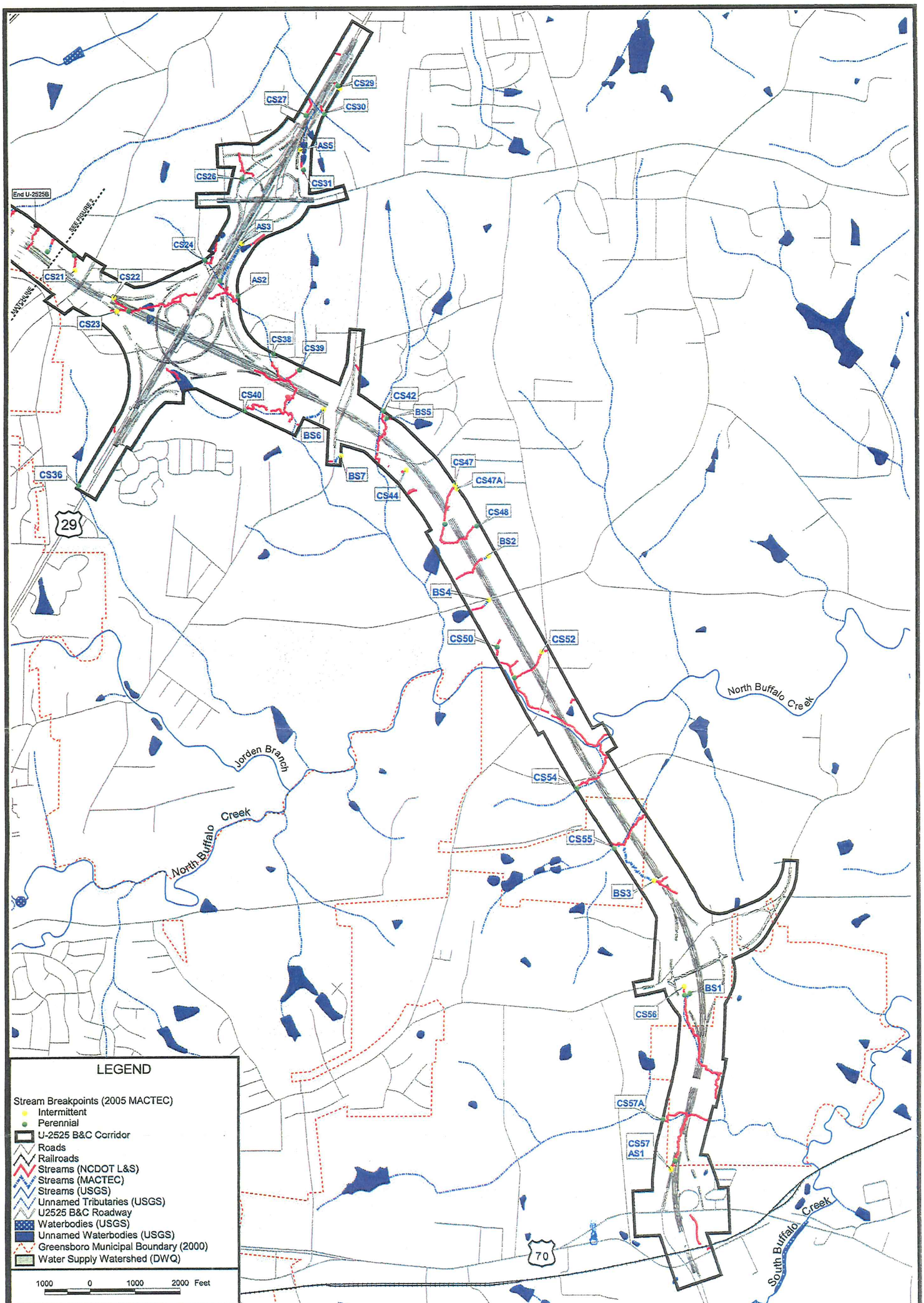
Prepared For:

MACTEC

U-2525 C Jurisdictional Waters

Project 6470-05-1056

Figure 3



Scale: 1" = 2,000'
Source: City of Greensboro, NCGIA, NCDOT

NOTE: For The Purposes of This Study, Streams Classified As Ephemeral-Only Were Not Labeled

Prepared: / Date: AKD/ 9.6.05
Checked: / Date: RAH 9.9.05

Stream & Wetland Delineations
Greensboro Outer Loop (U-2525 B&C)
Guilford County, North Carolina

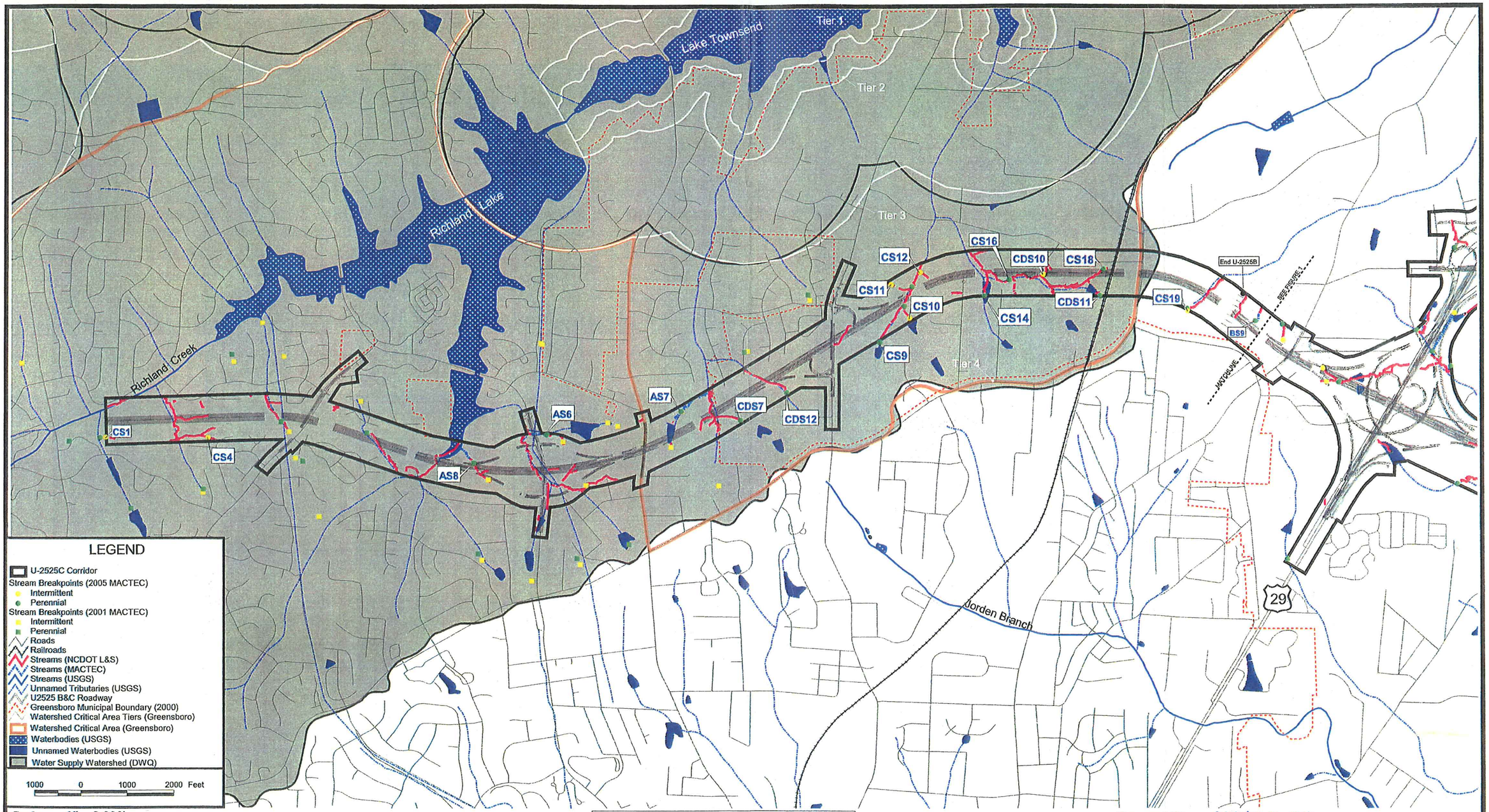
Prepared For:

MACTEC

U-2525 B Stream Classifications

Project 6470-05-1056

Figure 4



Scale: 1" = 2,000'
Source: City of Greensboro, NCGIA, NCDOT

NOTE: For The Purposes of This Study, Streams Classified As Ephemeral-Only Were Not Labeled

Prepared / Date: AKD/9.16.05
Checked / Date rgh 9-16-05

Stream & Wetland Delineations
Greensboro Outer Loop (U-2525 B&C)
Guilford County, North Carolina

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Prepared For:

MACTEC

U-2525 C Stream Classifications

Project 6470-05-1056

Figure 5